PTO/SB/21 (09-04)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 10/656,091 **Application Number** FORM Filing Date 09/05/2003

JUL 0 8 2005 명	First Named Inventor Thomas L. Bed			. Beck			
		Art Unit		2863			
All photos ior all corresponder	(Companies or all correspondence after initial filing)			Michael P.	Nghiem		
Total Number of Pages in This S	Submission	Attorney Docket N	umber	7855			
ENCLOSURES (check all that apply)							
Fee Transmittal Form	☐ Drawing(s	s)		After Allo	owance Communication to TC		
· Fee Attached	Licensing	-related Papers			Communication to Board als and Interferences		
Amendment / Reply	Petition				Communication to TC Notice, Brief, Reply Brief)		
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Extension of Time Request	Terminal	Disclaimer			nclosure(s) dentify below):		
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	SIGNATURE OF	APPLICANT, ATTO	RNEY, OF	R AGENT			
Firm	Reinhart Boe	mer Van Deuren s.c.					
Signature	Lcon	J J Kalmushi					
Printed Name	Leonard J. Ka	alinowski					
Date		Reg. No.	24,207				
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I hereby certify that this corres Service with sufficient postag Alexandria, VA 22313-1450 on	e as first class mail i	in an envelope addres	ne USPTO ssed to: C	or deposited commissioner	with the United States Postal for Patents, P.O. Box 1450,		
Signature	0	J. Kelman	۸,				
Typed or printed name L	eonard J. Kalinowski			Date	July 5, 2005		

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GROUP ART UNIT: 2863

EXAMINER: Michael P. Nghiem

In re application of: Thomas L.)	
Beck et al.)	
)	
Application No: 10/656,091)	
)	
Filed: September 5, 2003)	For: CONTROL SYSTEM FOR
)	CENTRIFUGAL PUMPS
Confirmation No.: 9926)	
Attorney Docket No. 7855)	
•)	
Customer No. 22922)	

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Date: July 5, 2005

July 5, 2005

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT WITHIN THREE MONTHS OF FILING OR BEFORE MAILING OF FIRST OFFICE ACTION (37 CFR 1.97(b))

NOTE: "An information disclosure statement shall be considered by the Office if filed: (1) within three months of the filing date of a national application; (2) within three months of the date of entry of the national stage as set forth in § 1.491 in an international application; or (3) before the mailing date of a first Office action on the merits, whichever event occurs last." 37 CFR 1.97(b).

NOTE: The "filing date of a national application" under 37 CFR 1.97(b) has two possible meanings. Where the filing is a direct one to the United States Patent & Trademark Office, the filing is defined in 37 CFR 1.53(b) as "the date on which: (1) A specification containing a description pursuant to § 1.71 and at least one claim pursuant to § 1.75; and (2) any drawing required by § 1.81(a), are filed in the Patent and Trademark Office in the name of the actual inventor or inventors as required by § 1.41. 37 CFR 1.97(b)(1). On the other hand, an international application that enters the national stage occurs when the applicant has filed the documents and fees required by 35 U.S.C. § 371(c) within the periods set forth in § 1.494 or § 1.495. 35 U.S.C. § 371(c) requires the filing of the following: (1) the national fee; (2) a copy of the international application, unless already sent by the International Bureau, and an English translation if filed in another language; (3) amendments under PCT Article 19, with a translation into English if made in another language; (4) an oath or declaration; and (5) a translation into English of any annexes to the International preliminary examination report, if such annexes were made in another language. 37 CFR 1.97(b)(2).

IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 CFR 1.97(b).

- NOTE: "No certification or fee is due when the filing is made within the above time period. It is advisable to ensure that no Office action has been mailed if the disclosure statement is delayed until after three months from filing.
- "An information disclosure statement will be considered to have been filed on the day it was received in the Office, or on an earlier date of a mailing if accompanied by a properly executed certificate of mailing under 37 CFR 1.8, or Express Mail certificate under 37 CFR 1.10. An Office action is mailed on the date indicated in the Office action." Notice of April 20, 1992 (1138 O.G. 37-41, 39).
- NOTE: "The term 'national application' includes continuing applications (continuations, divisions, continuations-inpart) so three months will be measured from the actual filing date of an application as opposed [sic] to the effective date of a continuing application." Notice of April 20, 1992 (1138 O.G. 37-41, 39).
- "An action on the merits means an action which treats the patentability of the claims in an application, as opposed to only formal or procedural requirements. An action on the merits would, for example, contain a rejection or indication of allowability of a claim or claims rather than just a restriction requirement (37 CFR 1.142) or just a requirement for additional fees to have a claim considered (37 CFR 1.16(d)). Thus, if an application was filed on Jan. I and the first Office action on the merits was not mailed until six months later on July 1, the examiner would be required to consider any proper information disclosure statement filed prior to July 1." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

"A petition for suspension of action to allow applicant time to submit an information disclosure statement will be denied as failing to present good and sufficient reasons, since 37 CFR 1.97 provides adequate recourse for the timely submission of prior art for consideration by the examiner." Notice of July 6, 1992 (1141 O.G. 63).

Dated: July 5, 2005 Reg. No. 24,207

Tel. No.: (414) 298-8359

SIGNATURE OF ATTORNEY

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Reinhart Boerner Van Deuren, s.c.

(P.O. Address)

1000 North Water Street, Suite 2100 Attn: Linda Gabriel, Docket Clerk

Milwaukee, WI 53202

CUSTOMER NO. 22922

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S Consigure	e for food 449A/PTC)			Complete if Known	
_				Application Number	10/656,091	003 k
INFC	RMATION	DIS	CLOSURE	Filing Date	September 5, 2003	<u>-</u>
STA	TEMENT B	ΥΑ	PPLICANT	First Named Inventor	Thomas L. Beck	
				Art Unit	2863	
	(Use as many she	ets as	necessary)	Examiner Name	Michael P. Nghiem	
Sheet	1	of	6	Attorney Docket Number	7855	

			U.S. PATENT	DOCUMENTS	
Cuanina	Cite	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant
Examiner Cite Initials * No.1		Number - Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear
	AA	US- 3,343,409	09/26/1967	Gibbs	
	AB	US- 3,585,484	06/15/1971	Dortort	
	AC	US- 3,851,995	12/03/1974	Mills	
	AD	US- 3,854,846	12/17/1974	Douglas	
	AE	US- 3,915,225	10/28/1975	Swink	
	AF	US- 3,918,843	11/11/1975	Douglas et al.	
	AG	US- 3,930,752	01/06/1976	Douglas	
,	AH	US- 3,936,231	02/03/1976	Douglas	
-	Al	US- 3,938,910	02/17/1976	Douglas	
	AJ	US- 3,951,209	04/20/1976	Gibbs	
	AK	US- 3,963,374	06/15/1976	Sullivan	
	AL	US- 3,965,983	06/29/1976	Watson	
	AM	US- 3,998,568	12/21/1976	Hynd	
	AN	US- 4,058,757	11/15/1977	Welton et al.	
	AO	US- 4,102,394	07/25/1978	Botts	
	AP	US 4,118,148	10/03/1978	Allen	
	AQ	US- 4,145,161	03/20/1979	Skinner	
	AR	US- 4,171,185	10/16/1979	Duke et al.	
	AS	US- 4,194,393	03/25/1980	Boley	
	AT	US- 4,220,440	09/02/1980	Taylor et al.	

	FOREIGN PATENT DOCUMENTS								
Examiner Cite Initials* No.1	Cito	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant				
	Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	Τ ⁶				

Examiner	Date
Signature	Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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	Substitute	for form 1449	9B/PTO			Complete if Known			
			0 N D		001105	Application Number	10/656,091		
					OSURE	Filing Date	09/05/2003		
	STAT	LEMEN	T BY	APP	LICANT	First Named Inventor	Thomas L. Beck		
						Art Unit	2863		
		(Use as ma	ny sheets	as nec	essary)	Examiner Name	Michael P. Nghiem		
$\overline{}$	Sheet	2	0	f 6		Attorney Docket Number	7855		

		NON PATENT LITERATURE DOCUMENTS	1
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisner, city and/or country where published.	T²
	1	GIBBS, S.C.: "Predicting the Behavior of Sucker-Rod Pumping Systems", JPT (July 1963, 769-78, Trans, AIME 228).	
	2	GARLOW, M.E.: Sensorless Estimation of a Sucker-Rod Pump Downhold Dynacard", Unico, Inc., August 12, 2002.	
	3	EVERITT, T.A, and JENNINGS, J.W.: An Improved Finite-Difference Calculation of Downhold Dynamometer Cards for Sucker-Rod Pumps", Paper SPE 18189, SPE Production Engineering (February 1992).	-
	4	JANSEN, P.L. and LORENZ, R.D.: Accurary Limitations of Velocity and Flux Estimation in Direct Field Oriented Induction Machines", Power Electronics and Applications, 1993, Fifth European Conference on , 1993; 312-318, Vol. 4.	
	5	LORENZ, R.D. and LAWSON, D.B.: A Simplified Approach to Continuous On-Line Tuning of Field-Oriented Induction Machine Drives*, IEEE Transactions on Industry Applications, Vol. 26, No. 3, May/June 1990.	
	6	HASAN, A.R. and KABIR, C.S.: Fluid Flow and Heat Transfer in Wellbores", Society of Petroleum Engineers, Richardson, TX, 2002.	

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Examiner	Date	
Signature	Considered	

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Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitu	ite for form 1449A/PT(0			Complete if Known	
				Application Number	10/656,091	
INF	ORMATION	DIS	CLOSURE	Filing Date	September 5, 2003	-
STA	TEMENT B	YA	PPLICANT	First Named Inventor	Thomas L. Beck	
				Art Unit	2863	
	(Use as many she	eets as	necessary)	Examiner Name	Michael P. Nghiem	
Sheet	3	of	6	Attorney Docket Number	7855	

	U.S. PATENT DOCUMENTS								
Examiner	Cite	Document Number	Publication Date	Name of Patentee or Applicant of	Pages, Columns, Lines, Where Relevan				
Initials *	No.1	Number - Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear				
	AU	US 4,286,925	09/01/1981	Standish	_				
	AV	US 4,363,605	12/14/1982	Mills					
	AW	US 4,390,321	06/28/1983	Langlois et al.					
	AX	US 4,406,122	09/27/1983	McDuffie					
	AY	US 4,438,628	03/27/1984	Creamer					
	AZ	US 4,474,002	10/02/1984	Perry					
	ВА	US 4,476,418	10/09/1984	Werner					
	BB	US 4,480,960	11/06/1984	Streib					
	ВС	US 4,483,188	11/20/1984	McTamaney et al.					
	BD	US 4,487,061	12/11/1984	McTamaney et al.					
	BE	US 4,490,094	12/25/1984	Gibbs					
	BF	US 4,507,055	03/26/1985	Fair et al.					
	BG	US 4,508,487	04/02/1985	Taylor et al.					
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	BK	US 4,534,706	08/13/1985	Palm et al.					
	BL	US 4,541,274	09/17/1985	Purcupile					
	ВМ	US 4,583,915	04/22/1986	Montgomery et al.					
	BN	US 4,594,665	06/10/1986	Chandra et al.					

	FOREIGN PATENT DOCUMENTS								
Examiner Cite Initials* No.1	Cito	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant				
		Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T⁵			
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Examiner Signature	Date Considered	

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Substitute	Substitute for form 1449A/PTO				Complete if Known			
				Application Number	10/656,091			
INFO	RMATION	DIS	CLOSURE	Filing Date	September 5, 2003			
STAT	STATEMENT BY APPLICANT			First Named Inventor	Thomas L. Beck			
				Art Unit	2863			
	(Use as many sheets as necessary)		Examiner Name	Michael P. Nghiem				
Sheet	4	of	6	Attorney Docket Number	7855			

			U.S. PATENT	DOCUMENTS		
Cyaminas	Cito	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant	
Examiner Cite No.1	No.1	Number - Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear	
	во	US 4,631,954	12/30/986	Mills		
	BP	US 4,661,751	04/28/1987	Wemer		
	BQ	US 4,681,167	07/21/1987	Soderberg		
	BR	US 4,695,779	09/22/1987	Yates		
	BS	US 4,741,397	05/03/1988	Weeks		
	ВТ	US 4,747,451	05/21/1988	Adams Jr. et al.		
	BU	US 4,830,112	05/16/1989	Erickson		
	BV	US 4,859,151	08/22/1989	Reed		
	BW	US 4,873,635	10/10/1989	Mills		
	вх	US 4,935,685	06/19/1990	Justus et al.		
-	BY	US 4,971,522	11/20/1990	Butlin		
	BZ	US 4,973,226	11/27/1990	McKee		
	CA	US 5,006,044	04/09/1991	Walker Sr. et al.		
	СВ	US 5,044,888	09/03/1991	Hester II		
	СС	US 5,064,349	11/12/1991	Turner et al.		
	CD	US 5,129,267	07/14/1992	Nicholls		
	CE	US 5,167,490	12/01/1992	McKee et al.		
	CF	US 5,180,289	01/19/1993	Wenholz et al.	-	
	CG	US 5,204,595	04/20/1993	Opal et al.		
	СН	US 5,222,867	06/29/1993	Walker Sr. et al.		

	FOREIGN PATENT DOCUMENTS								
Fuerrines	Examiner Cite No.1	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant				
		Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T ⁶			
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Examiner Signature	Date Considered		

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				Application Number	10/656,091			
INFC	RMATION	DIS	CLOSURE	Filing Date	September 5, 2003			
STA	TEMENT B	Y A	PPLICANT	First Named Inventor	Thomas L. Beck			
				Art Unit	2863			
	(Use as many sheets as necessary)			Examiner Name	Michael P. Nghiem			
Sheet	5	of	6	Attorney Docket Number	7855			

			U.S. PATENT	OCUMENTS		
Examiner Cite		Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Releva	
Initials * No.1		Number - Kind Code ² (if known)	MM-DD-YYYY	Cited boddinent	Passages or Relevant Figures Appear	
	CI	US 5,224,834	07/06/1993	Westerman et al.		
	C1	US 5,230,607	07/27/1993	Mann		
	CK	US 5,237,863	08/24/1993	Dunham		
	CL	US 5,246,076	09/21/1993	Watson		
	СМ	US 5,251,696	10/12/1993	Boone et al.		
	CN	US 5,252,031	10/12/1953	Gibbs		
	со	US 5,281,100	01/25/1994	Diederich		
	CP	US 5,284,422	02/08/1994	Turner et al.		
	CQ	US 5,316,085	05/31/1994	Dawson		
	CR	US 5,318,409	06/07/1994	London et al.		
	cs	US 5,362,206	11/08/1994	Westerman et al.		
	CT	US 5,372,482	12/13/1994	London et al.		
	CU	US 5,425,623	06/20/1995	London et al.		
	CV	US 5,441,389	08/15/1995	Wolcott et al.		
	CW	US 5,444,609	08/22/1995	Swamy et al.		
	СХ	US 5,458,466	10/17/1995	Mills		
	CY	US 5,634,522	06/03/1997	Hershberger		
	CZ	US 5,819,849	10/13/1998	Booth		
	DA	US 5,823,262	10/20/1998	Dutton		
	DB	5,829,530	11/03/1998	Nolen		

	FOREIGN PATENT DOCUMENTS								
Evaminar	Examiner Cite No.1	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant				
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T ⁶			

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Substitute	te for form 1449A/PTO				Complete if Known		
				Application Number	10/656,091		
INFORMATION DISCLOSURE				Filing Date	September 5, 2003		
STA	TEMENT BY	' Al	PPLICANT	First Named Inventor	Thomas L. Beck		
				Art Unit	2863		
	(Use as many sheets as necessary)		Examiner Name	Michael P. Nghiem			
Sheet	6	of	6	Attorney Docket Number	7855		

Evaminer	Cite	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant
Examiner Cite No.1		Number - Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear
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Examiner	-1-4 A1-1	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines, Where Relevant					
Initials*		Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T⁵				
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